

In the Claims

The following Listing of Claims replaces all prior versions in the application:

LISTING OF CLAIMS

1. (Currently amended) A charging device comprising:
an assembled battery having plural secondary batteries serially connected;
a charge power source unit for supplying charging current to both ends of the assembled battery having said plural secondary batteries serially connected;
plural charge controllers connected to both ends of the respective secondary batteries of said plural secondary batteries,
wherein said charge power source unit comprises:
a charging current output unit for outputting charging current to said assembled battery; and
a control unit for controlling the current of said charging current output unit based on notification of bypass current from said charge controllers, and
each of said plural charge controllers comprises:
a current control unit for bypassing the current that flows to said secondary battery when the terminal voltage of said secondary battery reaches a preset voltage value; and
a notification unit for notifying the control unit of said charge power source unit of said bypass current, wherein
said charge power source unit detects the bypass currents flowing to said plural charge controllers,
and wherein said control unit controls an output current of said charging current output unit so that the minimum current among the plural bypass currents notified from all of said plural charge controllers is substantially zero, when bypass current begins to flow in all of the charge controllers to which the respective secondary batteries are connected, detects the minimum current value of the bypass current flowing to the plural

charge controllers, and the charging current from the charge power source unit is reduced by the minimum value of these bypass currents.

2. (Previously Presented) The charging device according to claim 1, wherein said charging current output unit is a power source capable of delivering constant charging current.

3. (Canceled)

4. (Original) The charging device according to claim 1, wherein said control unit controls an output current of said charging current output unit so that, in the case where the plural bypass currents notified from said plural charge controllers are at or above a preset threshold bypass current value, said plural bypass currents become at or below said threshold bypass current value.

5. (Previously Presented) The charging device according to claim 1 wherein said notification unit provides notification of the between-terminal voltages of said secondary batteries together with said bypass currents to said control unit of said charge power source unit, and said control unit increases the output current of said charging current output unit in the case where said between-terminal voltages of said secondary batteries are lower than a present value.

6. (Previously Presented) The charging device according to claim 1, wherein said current control unit discharges said secondary batteries so that the between-terminal voltages of said secondary batteries are lowered to said preset voltage value in the case where said between-terminal voltages of said secondary batteries were above said preset voltage value at the start of charging.